and injury. *Conclusion:* LMWH given systemically or locally, with or without iontophoresis did not limit neointimal thickness in this stent model. This result suggest that clinical trials of LMWH may be similarly negative.

973-63 Predictors of Target Vessel Revascularization Following Coronary Stent Deployment

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Objective: We sought to determine the clinical, angiographic and ultrasound predictors of target vessel revascularization (TVR) after coronary stenting.

Methods: All patients who underwent ultrasound-guided 1 or 2 stent implantation over a 14 month period were included in this study. Clinical and angiographic data were prospectively collected in a dedicated database. Intravascular ultrasound analysis of the stented segments was performed in a core laboratory. Patients were followed for TVR over 8.0 ± 2.4 months.

Results: Of 239 consecutive study patients, TVR was performed in 32 (13%). No clinical characteristics or risk factors were predictive of TVR. The effects of other variables on the probability of TVR follows:

	Odds Ratio (Per 1 SD)	95% C.I.
Angiographic Variables		
Decreasing reference diameter	1.6	1.1–2.6
Increasing baseline % diameter stenosis	1.7	1.1–2.5
Increasing baseline lesion length	1.5	1.1–2.5
Distal flow at baseline <TIMI 3	5.0	1.7–14
Ostial location of lesions	2.9	1.1–7.5
Decreasing final % diameter stenosis	1.2	0.85–1.8
Final Ultrasound Variables		
Decreasing minimum stent lumen diameter	2.1	1.4–3.3
Decreasing minimum stent lumen area	2.2	1.4–3.8
Decreasing final % diameter stenosis	1.1	0.79–1.7
Decreasing final % area stenosis	1.3	0.89–1.9

Conclusions: Pre-intervention angiographic variables, particularly TIMI flow and ostial location, predict TVR. Post-stent percent stenosis by angiography or ultrasound do not impact outcome. However, absolute in-stent lumen area, measured by ultrasound, is an important determinant of TVR.

973-64 Influence of Lesion Length on Late Angiographic Outcome and Restenotic Process After Successful Stent Implantation

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The purpose of the present study was to investigate the influence of lesion length on late angiographic outcome and restenosis process after successful stent placement. The study population comprised 451 consecutive lesions implanted native arteries at elective situation (Palmaz-Schatz stent 401, Cordis stent 50) and satisfactory angiographic analysis before, after stenting and 3 or 6 months follow-up (FUP) in a single center (Feb. 1990–Feb. 1995). Total occlusion at baseline and follow-up were excluded. The patients were divided into 3 groups according to lesion length and following variables were compared.

Lesion length	1) <7.5 mm	2) 7.5–14.9 mm	3) ≥ 15.0 m	p
No. of lesion	145	255	51	
No. of stent	1.0 ± 0.2	1.0 ± 0	1.3 ± 0.5	<0.0001
Vessel size (mm)	3.22 ± 0.58	3.21 ± 0.54	3.20 ± 0.65	
MLD pre (mm)	0.94 ± 0.38	0.83 ± 0.38	0.77 ± 0.40	0.006
MLD post (mm)	2.95 ± 0.38	2.89 ± 0.42	2.77 ± 0.51	0.03
Acute gain (mm)	2.01 ± 0.48	2.06 ± 0.48	2.00 ± 0.47	
MLD FUP (mm)	2.15 ± 0.68	2.06 ± 0.71	1.80 ± 0.75	0.009
Late loss (mm)	0.80 ± 0.60	0.83 ± 0.59	0.97 ± 0.75	
Restenosis (50% ≤)	15%	20%	31%	0.01

No: number, MLD: Minimal Lumen Diameter.

Late angiographic outcome such as MLD at follow-up and binary restenosis rate correlated closely with lesion length. Lesion length was found to be exert a significant positive effect on late loss but not in acute gain by univariable and multivariable ($p < 0.001$) analysis. The relative gain/loss relationship within the groups showed that it vary with the lesion length {group 1) r. loss = 0.31 r. gain + 0.06, group 2) y = 0.23x + 0.11, group 3) y = 0.48x + 0.01}. In conclusion, lesion length itself influence on both late angiographic outcome and restenosis process. One should be carefully weighed in selection of the patients.

973-65 Are ACC/AHA Lesion Characteristics Predictive for Late Angiographic Results After Coronary Stent Placement?

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ACC/AHA lesion characteristics describe the complexity of stenoses to predict the outcome after PTCA. This retrospective study analyzes the quantitative angiographic 6-month follow-up (FU) of 588 lesions in 529 patients with successful coronary stent placement (p-values as calculated by ANOVA).

	A (n = 30)	B1 (n = 49)	B2 (n = 204)	C (n = 305)	p
MLD pre (mm)	0.86 ± 0.67	0.79 ± 0.34	0.60 ± 0.53	0.68 ± 0.46	<0.05
RD pre (mm)	2.98 ± 0.67	2.96 ± 0.50	3.08 ± 0.57	3.04 ± 0.56	ns
Number of stents	1.3 ± 0.5	2.5 ± 2.0	2.6 ± 1.5	3.0 ± 1.8	<0.05
Balloon/vessel	1.10 ± 0.13	1.12 ± 0.14	1.11 ± 0.19	1.15 ± 0.17	ns
Acute gain (mm)	2.07 ± 0.54	2.12 ± 0.53	2.43 ± 0.65	2.37 ± 0.62	<0.05
MLD post (mm)	2.93 ± 0.56	2.91 ± 0.46	3.03 ± 0.50	3.05 ± 0.53	ns
RD post (mm)	2.98 ± 0.58	3.05 ± 0.51	3.17 ± 0.49	3.17 ± 0.057	ns
MLD FU (mm)	2.19 ± 1.00	1.96 ± 0.80	2.06 ± 0.92	1.90 ± 0.91	ns
RD FU (mm)	3.01 ± 0.61	2.92 ± 0.57	3.03 ± 0.54	3.05 ± 0.56	ns
Late loss (mm)	0.73 ± 0.80	0.95 ± 0.83	0.97 ± 0.81	1.15 ± 0.83	<0.05
Restenosis rate	23.3%	20.4%	22.6%	31.8%	ns

Conclusions: The differences in acute data reflect the ACC/AHA grading of stenoses. Late loss is significantly higher in complex stenoses with a trend for higher restenosis rates. These data suggest that lesions of high ACC/AHA-grading also have a poorer long-term angiographic outcome after stenting.

973-66 Long-Term Clinical Outcomes in "Low-Risk" and "High-Risk" Patients Undergoing Coronary Stent Implantation

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Previously we showed that low-risk pts undergoing "optimal" Palmaz-Schatz stent implantation (ultrasound guidance and ≥16 atm adjunct PTCA) with reduced anticoagulation (aspirin and ticlopidine only) had excellent acute and long-term outcomes. To determine the outcomes in "high risk" pts, defined as (1) suboptimal implantation (poor apposition or incomplete expansion), (2) ≥3 stents, or (3) thrombus @ lesion site (or peri-infarction), treated with extended anticoagulation (aspirin, ticlopidine, and Lovenox™ for 2 weeks), we assessed early and late (>6-month) clinical events in a consecutive series of 1322 native coronary and SVG Palmaz-Schatz stent pts.

	Native Coronaries		SVG's	
	Low-risk (N = 417)	High-risk (N = 547)	Low-risk (N = 134)	High-risk (N = 224)
MC/SAT (%)	0.7/0.6	0.9/0.2	0.7/0.7	0.9/0.4
TLR (%)	11.7	19.3*	14.3	11.2
Re-PTCA (%)	8.5	13.0*	9.1	7.6
CABG (%)	3.6	7.1*	5.7	4.4

MC = major complications (death, MI, CABG); SAT = subacute thrombosis; TLR = target lesion revascularization; * $p < 0.05$ vs. low-risk group.

In conclusion: After ultrasound guided stent implantation, (1) both low- and high-risk groups had excellent acute outcomes, but (2) high-risk native coronary pts had significantly greater TLR.

973-67 Clinical and Angiographic Restenosis After Coronary Stenting. Incidence and Predictors

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To assess the incidence and predictors of restenosis (R) after coronary stenting (CS), we studied the evolution of 415 stented lesions from 373 consecutive pts (61 ± 10 yr, 87% male). A total of 469 stents (Palmaz-Schatz: 93% Wiktor: 7%) were implanted (1.13 stent/lesion). In 63% of pts, PTCA was done due to unstable angina. Indications for CS were: restenosis 14%, "bail-out" 31%, suboptimal result 6%, and "de novo" lesions 49%. The left anterior descending artery was the most frequently stented (54%).

Angiographic follow-up (FU) at 6 months was done in 94% of lesions. Clinical FU was completed in 94% of pts. Angiographic R (>50% criterion, QCA) occurred in 23% of lesions (CI 95%: 19–28%) but only 35 pts developed angina (clinical R: 11%, CI 95%: 8–15%). Univariate analysis of 33 clinical, angiographic and procedural variables showed that type C lesions ($p = 0.04$), number of stents per lesions ($p = 0.02$), diabetes ($p = 0.02$), minimal luminal